

# Work Order ID 58356



Page 1

May 4, 2010 9:54:10 AM

Item ID: D2896-1

Revision ID:

Item Name: Support

Start Date: 04/05/2010 Start Qty: 20.00

Required Date: 10/05/2010 Req'd Qty: 20.00

Reference:

Approvals:

Process Plan:

Date: 10-5-04

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2896

Rev U/R

100



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

Machine as per Folio FA167 Tumble & Deburr

0.00

0.00

110



QC

Quality Control

QC1- Inspect dimensions to dimension sheet

Memo

0.00

0.00

120



QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

0.00

Just 10-05-18 Accept

8.0

Cust Item ID:

Customer:

DT 10/05/17

MU 10/05/08

MU 10/05/18

QWL 10/05/19

8 0

Pho →

W/O: 58356

## WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/05/17	100	wright in "memo" a Change Batch# in programme #5000  perm change	DA 10/05/17	10/05/17		10/05/17	10/05/17
				10.06.01			

Part No: D2896-1 PAR #: \_\_\_\_\_ Fault Category: Machining NCR: Yes No DQA: \_\_\_\_\_ Date: 10.06.02  
 Resolution: Accepted Disposition: use as is QA: N/C Closed: \_\_\_\_\_ Date: 10/06/02

NCR: 58356

## WORK ORDER NON-CONFORMANCE (NCR)

DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/5/18	# 100	First run has Dim 3560/3.550 meas 3.544" Qty +2 (1 blank makes 2) R.C. tool offset too low → LOA.	GP 10.05.18 per 051 042	→ Raise of tool.  → Acceptable. Effect on Strength negligible. Fit OK	mmf 10/05/18	mmf 10/05/19	GP 10.05.18 per 051 042	S 10/05/18

NOTE: Date &amp; initial all entries

# Work Order ID 58356

May 4, 2010 9:54:10 AM



Page 2

Item ID: D2896-1

Accept



Setup Start



Revision ID:

Item Name: Support

Stop



Start Date: 04/05/2010 Start Qty: 20.00



Cust Item ID:

Required Date: 10/05/2010 Req'd Qty: 20.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130



HandFinish

Hand Finishing

HandFinishing

Memo

Mask Ø0.625" and face and bore as per Detail D and note 4 hole prior to paint

0.00

0.00

140



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel

Memo

START TIME:

FINISH TIME:

OVEN TEMPERATURE:

0.00

0.00

N/A

CP 10-05-04

150



QC

Quality Control

QC3- Inspect Part Finish

Memo

0.00

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

[illegible]

Page 3

**Accept**

[illegible]**Setup Start**

**Stop**

\_\_\_\_\_

**Cust Item ID:**

1. *Author's address:* Department of Psychology, University of California, San Diego, 3541 La Jolla Village Drive, San Diego, CA 92093, U.S.A. (e-mail: [shawn@uclink4.berkeley.edu](mailto:shawn@uclink4.berkeley.edu)).

**Customer:**

Run Start

**Stop**

[illegible]

**Insp.**  
**Stamp**

0.00

[illegible]

## SprayPaint

0.00

## SprayPaint

## Memo

## Spray Painting

Prime Bore as per QSI 005 4.2.

0.00

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#### QC14- Inspect Spray Paint

0.00

QC

## Memo

## Quality Control

0.00

[illegible]

Identify as per dwg & Stock Location: X-tube

0.00

### Packaging

## Memo

### Packaging

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 58356**

May 4, 2010 9:54:10 AM



Page 4

Item ID: D2896-1

Accept



Setup Start



Revision ID:

Item Name: Support

Stop



Start Date: 04/05/2010 Start Qty: 20.00



Cust Item ID:

Required Date: 10/05/2010 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/05/31 *[Signature]*  
MF  
10-5-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

May 4, 2010 9:54:30 AM

Page 1

Work Order ID: 58356



Parent Item: D2896-1



Parent Item Name: Support

Start Date: 04/05/2010

Required Date: 10/05/2010

Comments: IPP: B 02.11.26 Reformat; Added P/O; Added mask hole KJ  
IPP Rev: C As per Rev B 07-04-16 JLM  
IPP D 08.03.19 Re-format EC verified by DD

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Qty	Date	Status
DSK080		Manufactured	No				Each	10.0000	0.5			
D2896-1 TURNING DETAIL												

Location

Loc Qty

Loc Code

MAT

10

47929

10

10 DIT 10/05/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	58356
<b>Description:</b> Support		<b>Part Number:</b>	D2896-1
<b>Inspection Dwg:</b> D2896		<b>Rev:</b> B	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
<b>HAAS Section</b>								
AA	2.152	2.172		2.160	2.161	2.160	2.160	2.170
AB	2.340	2.360		2.354	2.346	2.355	2.357	2.353
AC	3.550	3.560		3.555	3.555	3.556	3.556	3.556
AD	3.770	3.790		3.780	3.780	3.784	3.783	3.774
AE	0.065 x 0.315	0.085 x 0.335		0.064 x 0.317	0.064 x 0.317	0.064 x 0.317	0.064 x 0.316	0.064 x 0.319
AF	1.42	1.48		1.445	1.445	1.454	1.450	1.453
AG	0.833	0.853		.838	.838	.845	.847	.847
AH	0.240	0.260		.250	.250	.250	.250	.250
AI	0.261	0.266		.263	.263	.263	.263	.264
AJ	0.189	0.194		.191	.191	.191	.191	.191
AK	1.990	2.010		1.998	1.999	1.997	1.998	1.999
AL	0.625	0.630		.627	.627	.627	.627	.627
AM	101.75	105.75		103.75	103.75	103.75	103.75	103.75
AN	0.053	0.073		.063	.063	.063	.063	.063
AO	0.926	0.946		.939	.938	.940	.944	.946
AP								
AQ								
AR								
<b>Ensure that Ø0.625" bore is perpendicular to 1.764" bore within 0.005"</b>								
<b>Accept/Reject</b>								

<b>Measured by:</b> <i>MMF</i>	<b>Date:</b> 10/05/19
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<b>Audited by:</b> <i>amf</i>	<b>Date:</b> 10/05/19
-------------------------------	-----------------------

<b>Prototype Approval:</b>	<b>Date:</b>
----------------------------	--------------

Rev	Date	Change	Revised by	Approved
A	02.12.13	New Issue	KJ/RF	
B	04.05.27	Dimension AE changed	KJ/RF	
C	06.11.22	Note added to HAAS section	KJ/JLM	
D	07.04.16	Dimsheet updated per Dwg Rev. B	KJ/JLM	
E	08.04.22	Reformat	KJ/JLM	<i>[Signature]</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	
<b>Description:</b> Support		<b>Part Number:</b>	D2896-1
<b>Inspection Dwg:</b> D2896	<b>Rev:</b> B	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION DIMENSION SHEET


☒ First Article
 ☐ Prototype

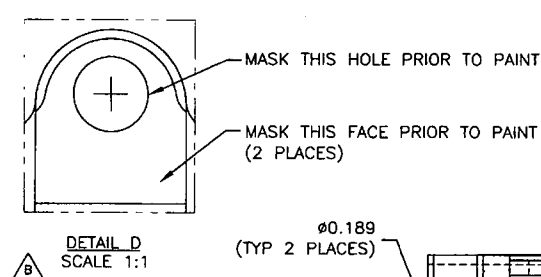
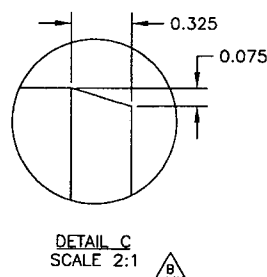
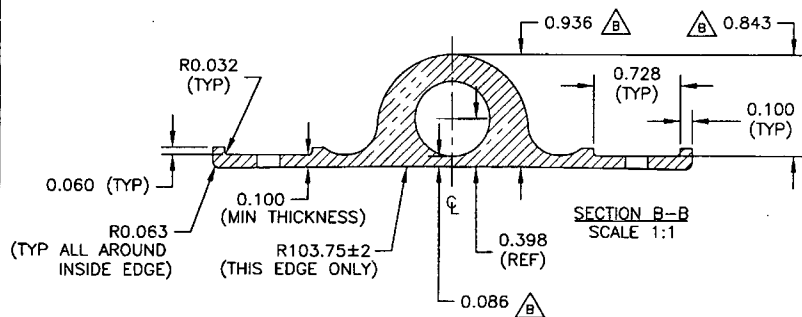
				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	7	8	4	5
<b>HAAS Section</b>								
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AK	1.990	2.010		1.999	2.003	2.001		
AL	0.625	0.630		.627	.627	.627		
AM	101.75	105.75		103.25	103.75	103.25		
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AO	0.926	0.946		.946	.946	.946		
AP								
AQ								
AR								
<b>Ensure that Ø0.625" bore is perpendicular to 1.764" bore within 0.005"</b>								
<b>Accept/Reject</b>								

**Measured by:** MMW
**Date:** 10/05/19

**Audited by:** crx
**Date:** 10/05/19

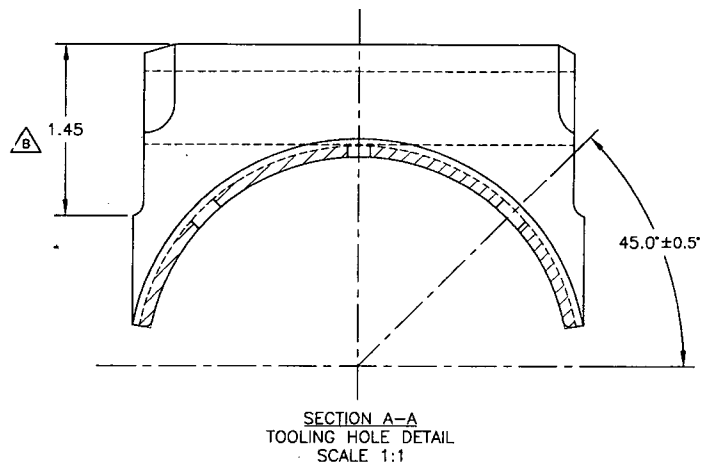
**Prototype Approval:** \_\_\_\_\_
 **Date:** \_\_\_\_\_

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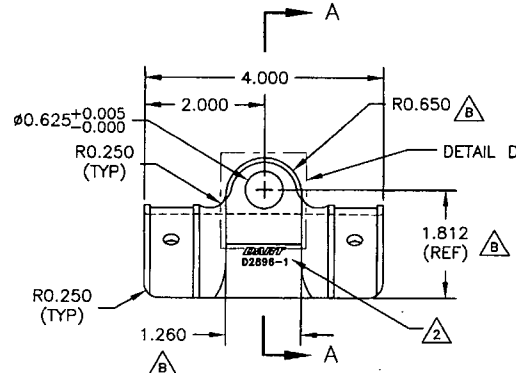
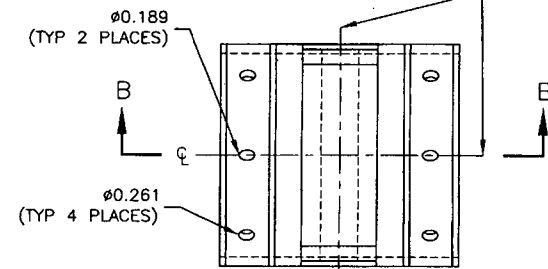
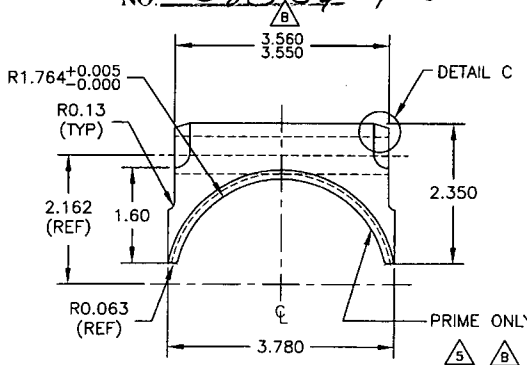


**RELEASED**  
07.04.12  
PER BEN 446

HOLES WITHIN 0.005 OVER ENTIRE LENGTH



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 58354 P10-504



D2896-1

- 1) MATERIAL: 17-4 PH STAINLESS STEEL  
HEAT TREAT TO H900 CONDITION  
(900°F FOR 1 HR, AIR COOL)  
MIN UTS = 170 KSI (38 HRC)
- 2) IDENTIFY WITH DART LOGO AND PART NUMBER IN THIS AREA  
WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP
- 3) BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) FINISH: ~~POWDER COAT WHITE (REF 4.3.5.2) PER DART QSI 005 4.3~~  
PRIME INSIDE SURFACE AS SHOWN PER DART QSI 005 4.2
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 7) ALL DIMENSIONS ARE IN INCHES

D2896-1

**UNDER REVIEW**  
03.03.11  
NO MORE POWDER COAT

N/A P10-05.04

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B	07.03.19	INCORP. A1-A4, FINISHING NOTES
A	01.10.19	NEW ISSUE
DESIGN	GP	DRAWN BY PH
CHECKED	PH	APPROVED
DATE	07.03.19	TITLE
		SUPPORT
		DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
		DRAWING NO. D2896
		REV. B
		SHEET 1 OF 1
		SCALE
		1:2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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